

V. BIRDS OF TATARENDA AND FORTIN CREVAUX,  
IN THE BOLIVIAN CHACO.

The birds obtained by the Expedition at the fourth Station (Tatarenda) and fifth (Fortin Crevaux) are enumerated together, as both these places are situated in the Bolivian Chaco and are not very far apart. Their natural features have been described above.

1. *RHEA AMERICANA* Lath.

This bird was often seen at Tatarenda in open places, but as soon as danger threatened it ran in among the spiny bushes, where it could not be pursued.

2. *ORTALIS CANICOLLIS* (Wagl.).

An adult specimen from Tatarenda, shot in April 1902. Iris brown ("gialla," according to Salvadori).

A young bird, probably of this species, was shot at the same place at the end of May 1902. It is stated to have had brownish-yellow irides. The tail-feathers are not yet visible among the coverts, but the quills of the wings are almost fully developed, and the wings measure 210 mm. in length. The primaries are, however, not quite full-grown and reach only a few millimetres beyond the inner secondaries. The colour of the young bird is a little more brown than that of the adult.

3. *PENELOPE OBSCURA* Wagler\*.

Mr. von Hofsten informs me that this bird is known under the name "*Pavo del monte*," which it shares with other *Cracidae*. It lives in small family-flocks at the edge of the forest. When scared it tries to escape from danger by running along the branches of the trees or jumping from branch to branch rather than by flight. It does not fly well or easily.

\* [Dr. Lönnberg has sent us for examination a skin of this *Penelope*, which agrees well with specimens of *P. obscura* in the British Museum from the same district. He calls our attention to the sharply excised outer primaries—a character stated in the B. M. Catalogue (xxii. p. 473) to be peculiar to *Pipile*, *Aburria*, and *Chamepetes*, which, however, is certainly not the case.—EDD.]

4. *COLUMBA MACULOSA* Temm.

In great flocks near water, Colonia Crevaux, in April 1902. Iris greyish yellow ("bianca," according to Salvadori).

5. *COLUMBA PICAZURO* Temm.

Near Colonia Crevaux, April 1902. Common in large flocks. Iris light grey (stated to be "rosso-fiamma" by Salvadori, *t. c.*).

6. *COLUMBULA PICUI* (Temm.).

In great flocks in the dry woods at Colonia Crevaux, April 1902. Iris lilac.

7. *PORPHYRIOPS MELANOPS* (Vieill.).

Two specimens shot at Tatarenda, March 26th, 1902, agree perfectly as regards coloration with the description in the *Cat. of Birds* (xxiii. p. 182) except that the inner secondaries are not "edged externally with white," but have the outer web spotted and mottled with white. In addition to this I may observe that the head does not shew the same colour as the back, but the upper surface of the head from the base of the bill and the frontal shield is quite black, while on the occiput it becomes dark brown and soon passes into the olive-brown of the hind-neck. The dark ashy colour of the sides of the head extends upwards to the eyebrows. The bill seems to have been olive-green.

+8. *GALLINULA GALEATA* Bp.

Tatarenda, March 25th, 1902. Length of wing 190 mm.

9. *FULICA LEUCOPTERA* Vieillot.

A young bird, with the frontal shield not much developed, from Tatarenda, April 1902. The age may account for the fact that the iris was yellow (not "fiery red," as stated in *Cat. Birds*, vol. xxiii. p. 224).

10. *PODICIPES AMERICANUS* Garnot.

Iris crimson.

Two adult birds shot at Tatarenda in March 1902. Iris yellow.

A young specimen, not yet full-grown, shot the same day

is smoky blackish above, washed with brown on the lower back. Rump greyish brown. Under parts greyish white with a faint silky gloss and some grey spots where the basal parts of the down are visible. Neck grey, throat white, sides of head grey, crown blackish with sandy-coloured tips to the feathers.

11. *PARRA JACANA* (Linn.).

The iris is stated by Mr. von Hofsten to be "brown" in an adult as well as in a young bird, both shot at Tatarenda, the former on April 26th, 1902, the latter on March 27th, 1902. In the Cat. Birds Brit. Mus., as well as by Salvadori, it is stated to be "yellow."

This species was common, and was seen in large flocks on the floating water-plants.

12. *VANELLUS CAYENNENSIS* (Gm.).

Specimens were shot at Tatarenda and other places in the Bolivian Chaco in March 1902.

In one example shot on March 3rd some of the rectrices have just been moulted and have rather broad white tips, but the old tail-feathers of the specimens have the white tips almost or quite worn off. Sides of head ashy grey, but washed with brown. The colour is somewhat intermediate between that of *V. cayennensis* and *V. chilensis*; the measurements indicate partly the smaller form. The short wing and short culmen indicate *V. cayennensis*, the rather long tail and short tarsus *V. chilensis*. I suppose that these forms intergrade.

13. *HIMANTOPUS MELANURUS* Vieill.

A specimen was shot at a pool near Carapari, on the way from Tarija to Caiza, in March 1902.

+14. *BARTRAMIA LONGICAUDA* (Bechst.).

Tatarenda, April 1902.

15. *ARAMUS SCOLOPACEUS* (Gmelin).

Tatarenda, March 20th, 1902. Iris brown.

Culmen 120, tarsus 130, wing 345, tail 162 mm. These measurements are larger than those recorded in the Cat. Birds

Brit. Mus., but the description in that work agrees with the present specimen.

†16. *PLEGADIS GUARAUNA* (Linn.).

An adult bird shot at Carapari, March 11th, 1902. Iris hazel.

A young bird from Tatarenda, March 20th, 1902.

This species occurred in flocks on the wet meadows. Mr. von Hofsten says that he thinks that there must be two kinds of this Ibis, as he remembers that he always saw larger birds in one flock and smaller birds in another. The differences in the skins that I have examined are, however, not greater than those recorded for young and adult or male and female birds in the 'Catalogue of Birds.'

17. *THERISTICUS MELANOPIS* (Gm.).

A specimen shot at Tatarenda, March 23rd, 1902 (iris reddish yellow, feet red), has the coloration of the plumage as described in the Cat. Birds Brit. Mus., but the subterminal black band of the dorsal feathers is only faintly visible. Two or three of the inner secondaries are white on the outer web.

†18. *PLATALEA AJAJA* (Linn.).

Iris yellowish white, according the label (according to Salvadori "iride bruna," and according to the Cat. of Birds bright carmine). Length of wing 390, of tail 106, of culmen 180 mm.; these measurements are all larger than those indicated in the Cat. of Birds. The tarsus measures 108 mm., which is the same as in the work just quoted.

The Roseate Spoonbill is common at the borders of all the waters. A specimen was shot at Tatarenda, April 3rd, 1902. This species lives in pairs and is very shy.

19. *MOLYBDOPHANES CERULESCENS* (Vieill.).

Occurs in large flocks along the river, but is very shy. Iris light yellow, legs black. April 1902, Fortin Crevaux.

†20. *ARDEA COCOI* Linn.

Iris yellow; legs yellow, according to the label (said to be "grigio-bruna" by Salvadori, Boll. Tor. x. p. 21). Only one specimen seen and shot, April 1902, at Tatarenda.

† 21. *HERODIAS EGRETTA* (Wilson).

Single specimens were seen here and there on swamps and rivers, but they were very shy. A specimen was shot at Colonia Crevaux, in April 1902.

22. *NYCTICORAX TAYAZUGUIRA* (Vieill.).

March 26th, 1902; Tatarenda. Iris yellow.

A young bird in transitional plumage, probably belonging to this species, was shot at Tatarenda in March.

23. *SYRIGMA CYANOCEPHALUM* (Molina).

Two specimens from Tatarenda. Both have the feathers of the nuchal crest tipped with isabelline or the same colour as the feathers of the neck. The crown is very dark slate-coloured, inclining to black with a bluish-grey tinge. Iris steel-grey. The bill seems to have been red, with black tip. Length of the tarsus in one specimen 85, in the other 90 mm. Otherwise both agree with the description and the measurements in *Cat. Birds Brit. Mus.*

This bird, found in pairs at the lakes, seems to be new to Bolivia.

24. *TIGRISOMA MARMORATUM* (Vieill.).

A young specimen (iris brown) shot at Tatarenda on March 24, 1902, seems to belong to this species. Crown chestnut, with V-shaped black spots. Neck tawny, almost chestnut behind, lighter on the sides, with black transverse bars. Sides of head tawny, with blackish streaks. Middle of throat clothed with white feathers, with small buff and brown spots. Feathers of fore-neck white, with a transverse blackish bar, bordered on both sides with tawny. On the breast there are several bars on each feather. In other respects the coloration resembles that of the young *Tiger-Bittern* as described in *Cat. Birds Brit. Mus.*

25. *HETEROCNUS BOLIVIANUS*, n. sp.

This bird resembles *Tigrisoma* as well as *Heterocnus* in coloration. That it belongs to the latter genus, however, is proved by the fact that a median feather-stripe is continued on the throat almost to the vertical through

the posterior end of the culmen, and thus a good deal in front of the eye. General colour of the mantle and the wing-coverts dark, almost blackish grey, with a rather strong greenish-olive tinge in some lights. All feathers with a black median shaft-line, and finely mottled with numerous minute dots of yellowish, more ochraceous on the mantle, more whitish on the wing-coverts. This same mottling and general colour extends also over the scapulars and the outer web of the proximal secondaries. Secondaries otherwise dark slaty, with a brownish tinge on the outer edges. Primaries darker slaty with a bluish tinge, and fringed with white at the tips. Bastard-wing and large primary-coverts similar (but without any white bars as in *Heterocnus cabanisi*). Bend of the wing white, with a buffy tinge and with brown spots on the inner web of the feather. Crown of the head black; occipital crest chestnut-red, with black tips to some of the feathers. The whole of the amply-frilled hind-neck and sides of the neck uniform chestnut-red. Lores and orbits naked, a narrow black stripe separating the bare area from the chestnut-red ear-coverts and sides of the nape. This black band extends down the sides of the bare throat, but is there streaked with white. A white feather-band extends forward in the middle of the otherwise bare throat, as has been stated above. This white stripe continues down the middle of the fore-neck, bordered on each side by the narrow black band; further down it becomes broadly spotted with brown and black. Thus the middle of the fore-neck has a brown-and-black central band bordered on each side by a white band, and that again by a narrow black stripe separated from the chestnut-red sides of the neck. The lowermost part of the fore-neck is more irregularly and broadly spotted or rather striped with black, white, and chestnut. Breast slaty grey, with a rufous tinge on the ends of the feathers. Abdomen light, and under tail-coverts dusky cinereous. Flanks and axillaries dark slaty, with narrow white wavy cross-bands. Under wing-coverts similar, except the smallest, which have the same coloration as the upper

lesser wing-coverts. Back and upper tail-coverts dark slaty grey. Tail-feathers dark slaty, with an olive-green tinge. Iris brown. Bill in a dry state black, except the lower side, which is light horn-coloured. Culmen 108, wing 355 (360), tail 148, tarsus 110 mm.

From *Heterocnus cabanisi* this species is easily distinguished by its different coloration. The back is not marked with wavy cross-lines, but minutely dotted; the ear-coverts are not slaty blue, but chestnut-red; the nape and hind-neck are not sandy buff barred with black, but uniform chestnut-red.

The specimen was obtained at Tatarenda on March 20, 1902.

+26. TANTALUS LOCULATOR Linn.

A specimen (of rather small dimensions) was shot at Tatarenda in April 1902.

*Tantalus* is said by the collector to occur singly here and there on the small swamps. At a place between Tarija and Caiza, however, it was seen in large flocks, soaring very high in the air. It is said to be very shy, and to run a long way before it rises.

27. EUXENURA MAGUARI (Gm.).

Three specimens were seen and shot at a swamp near Tatarenda. They made a clattering noise with their bills, like the European Stork.

+28. MYCTERIA AMERICANA Linn.

The Jabiru was seen at Fortin Crevaux, but was very shy, and Mr. von Hofsten could not get near it.

29. CHAUNA CRISTATA (Sw.).

Several specimens of this bird were shot at Tatarenda in March 1902. It lives in pairs on the swamps and rivers.

30. CHENALOPEX JUBATUS (Spix).

One specimen was observed and shot at Tatarenda. The conjecture that this species would occur in Bolivia is thus proved to be correct. The feet are red.

- +31. *CAIRINA MOSCHATA* (Linn.).  
Two young birds obtained at Tatarenda. Iris brown.
32. *NETTION BRASILIENSE* (Gm.).  
Tatarenda, March 29th, 1902.
33. *NETTION TORQUATUM* (Vieillot).  
Tatarenda, March 19th and April 1902.  
Some uncertainty seems to have prevailed as to whether this bird belonged to the Bolivian fauna or not.
- +34. *NOMONYX DOMINICUS* (Linn.).  
Only one specimen observed, at Tatarenda, in April 1902.
- +35. *GERANOSPIZIAS CÆRULESCENS* (Vieill.).  
Iris brownish yellow. Tatarenda, March 30th, 1902.
- +36. *MICRASTUR SEMITORQUATUS* (Vieill.).  
A young bird, which quite agrees with the description in the Cat. of Birds, was shot at Tatarenda on the 24th of March, 1902.
37. *URUBITINGA UNICINCTA* (Temm.).  
Colonia Crevaux, April 1902.
38. *ACCIPITER PILEATUS* (Temm.).  
A young bird from Tatarenda, March 1902.
39. *BUTEO ERYTHRONOTUS* (King).  
An adult, but not very old female, was shot at Tatarenda in March 1902.
- +40. *HETEROSPIZIAS MERIDIONALIS* (Lath.).  
An adult specimen was shot at Tatarenda on March 21st, 1902. The species is stated to be common.
41. *ASTURINA PUCHERANI* Verr.  
Iris brown in a young specimen, yellow in an adult. Both were shot at Tatarenda in March 1902.  
A third (young) specimen was shot at Aguaienda.
- +42. *GAMPSOXYX SWAINSONI* (Vigors).  
Colonia Crevaux, April 1902. Iris reddish yellow.
43. *TINNUNCULUS CINNAMOMIMUS* (Swains.).  
An adult male from Tatarenda, April 1902.

44. *BUBO VIRGINIANUS* (Gm.).

Only one specimen, shot at Colonia Crevaux in April 1902.

45. *SPEOTYTO CUNICULARIA* (Molina).

This Owl was observed sitting in bushes on the grassy plains looking out for small birds and mice, which constitute its principal food. It was plainly diurnal.

Specimens shot at Tatarenda, in March and April 1902, have the length of wing 183–186 mm. Under surface of wing, including the wing-coverts, entirely white with a very faint isabelline tinge, and a few of the outer large coverts with dusky tips, together forming a dark band. The inner webs of the secondaries almost entirely white. The outermost tail-feather dusky white throughout, except for two dusky spots on the outer web; the rest have the whole inner web white, the bars being confined to the outer web. On the third and fourth the dark bars cross over the inner web also, but are much narrower and less well-defined on the inner web, the ground-colour of which is white. The specimens from this station were accordingly decidedly lighter than the specimens from Moreno (see above, p. 418), which had all the tail-feathers, including the outermost, barred across both webs, although on a white ground-colour.

I regard the Owl from Moreno as identical with the typical *Strix cunicularia* from Chile. All other known varieties of *Speotyto* are darker than the Chilean form\*; but, on the other hand, as the Burrowing-Owls of the Bolivian Chaco are still lighter than the Chilean, they might be regarded as representing a geographical variety or subspecies.

The size of the Bolivian Owl is comparatively large, as is also that of the Chilean.

†46. *SYRNIUM PERSPICILLATUM* (Latham).

A specimen shot at Tatarenda, March 25th, 1902. Iris yellow.

\* Cf. Stone, "On a Collection of Birds . . . with a Review of the South-American Species of *Speotyto* and *Troglodytes*," Proc. Acad. Nat. Sci. Philadelphia, 1899.

47. *CONURUS ACUTICAUDATUS* (Vieillot).

In flocks near the water. March 13th-15th, 1902, Tatarenda, Caiza. Iris yellowish brown.

48. *CONURUS LEUCOPHTHALMUS* (Müll.).

In small flocks, less common than the foregoing. March 17th, 1902, Tatarenda. Iris yellowish brown.

49. *PYRRHURA MOLINÆ* (Mass. et Souancé).

Iris brown. March 20th, 1902, Tatarenda. Occurs in large flocks.

50. *MYIOPSITTACUS MONACHUS* (Bodd.).

Occurs in small flocks numbering about eight or ten. Two specimens were shot at San Diego on our way to the Bolivian Chaco, March 21st, 1902. Iris greyish brown.

51. *CHRYSOTIS ÆSTIVA* (Linn.).

Iris reddish yellow. Occurs in large flocks of several hundreds, but is very shy. In the morning and evening they fly to and from their feeding-places, making a deafening noise. March 17th, Tatarenda; April 1902, Colonia Crevaux.

Not mentioned by Salvadori and believed to be new to Bolivia.

52. *PIONUS BRIDGESI* Boucard.

Feathers of the head green with dark violet, almost blackish, edges. Lores black. On the hind part of the crown and on the occiput the cinereous bases of the feathers are broadly conspicuous. On the throat the edges of the feathers are more broadly coloured with purple or violet. A broad band across the fore-neck purple or violet. Back and wing-coverts olive-green with a slight golden gloss. Tail below green, with a bluish shade. Wing 197, tail 93 mm. Iris reddish yellow.

This specimen was shot by Count E. von Rosen at Tatarenda, April 1902.

53. *CAPRIMULGUS PARVULUS* Gould.

Tatarenda, April 3rd, 1902. Iris brown.

54. *PODAGER NACUNDA* (Vieillot).

This large Goatsucker was seen in small flocks flying

about in broad daylight near a rivulet, and squatting on the sandy ground at Tatarenda.

55. *CHLOROSTILBON AUREIVENTRIS* (d'Orb. et Lafr.).

Specimens were obtained at Tatarenda in April 1902.

+56. *CROTOPHAGA ANI* Linn.

A specimen in moult was shot in April 1902 at Tatarenda. The new feathers are strongly metallic and glossy, the old are not.

This bird occurred in small flocks of from ten to fifteen in number, and was very shy.

57. *BUCCO STRIATIPLECTUS* Sclater.

Tatarenda; several specimens shot in April 1902. Iris whitish yellow.

58. *RHAMPHASTUS TOCO* Müll.

Iris brown, as stated on the labels of all three specimens preserved (but according to Salvadori, *l. c.*, it is "gialla").

Two adult specimens were shot in April at Tatarenda, and a young one at Zapatero on the 10th of March, 1902.

59. *DENDROBATES OLIVINUS* (Malh.).

Two female specimens shot at Tatarenda in April 1902. Iris brown according to the label (stated to be "rossa" by Salvadori).

60. *DENDROCOPUS MIXTUS* (Bodd.).

A female, the only one observed, was shot at Colonia Crevaux. The upper surface of the head is uniform dark brown, becoming almost black on the occiput, without any light spot. The feathers of the forehead are lighter brown with buffish shaft-stripes. In some respects this specimen seems to approach *D. cancellatus*.

61. *CHRYSOPTILUS CRISTATUS* (Vieill.).

A specimen was shot at Colonia Crevaux in April 1902.

62. *CAMPOPHILUS LEUCOPOGON* (Valenc.).

Male and female specimens from Tatarenda, March 1902.

In its habits this species resembles the European Black Woodpecker (*Picus martius*) and it emits a similar sound.

63. *THAMNOPHILUS MAJOR* Vieill.

A male specimen, the only one observed, was shot at Tatarenda. Although otherwise agreeing with the description in the *Cat. Birds Brit. Mus.*, it is distinguished by its remarkably long tail, which measures 90 mm.

64. *XIPHOCOLAPTES MAJOR* (Vieill.).

Tatarenda, April 1902. The belly of this specimen is quite unspotted. It is met with only in the palm-woods and resembles a Woodpecker in flight and habits. It has a sharp whistling note.

65. *TÆNIOPTERA IRUPERO* (Vieill.).

Several specimens were procured at Tatarenda in March and April, and at Pileomaya in April 1902.

This bird usually sits at the top of a tree that stands alone in some open place. Now and then it is seen to fly up in the air and catch some passing insect, but it always returns to the same twig. It is not impossible that the white colour of the plumage of this bird may attract insects in the same way that the yellow throat of *Merops apiaster* (which the author has watched in Transcaucasia) gives one the impression of a yellow flower, when the bird sits on the ground.

66. *MACHETORNIS RIXOSA* Vieillot.

Tatarenda, March 21st, 1902.

67. *EMPIDAGRA SUIRIRI* (Vieillot).

Specimens from Fortin Crevaux and Tatarenda, April 1902.

68. *PYROCEPHALUS RUBINEUS* (Bodd.).

Tatarenda, April 1902.

+69. *MYIARCHUS TYRANNULUS* P. L. S. Müll.

Tatarenda, April 1902.

70. *EMPIDONOMUS AURANTIO-ATRO-CRISTATUS* (d'Orb. et Lafr.).

Tatarenda, April 1902.

71. *PITANGUS BOLIVIANUS* (Lafr.).

A young specimen from Fortin Crevaux, shot in April 1902,

has no yellow on the crown, and shews well-developed rufous margins to the wing- and tail-feathers. The measurements indicate that it belongs to the larger southern species.

This bird was usually seen near water and had the manners of a Flycatcher. Not common.

+72. *MYIODYNASTES SOLITARIUS* (Vieill.).

Only one specimen observed and shot at Tatarenda, April 1902.

+73. *MILVULUS TYRANNUS* (Linn.).

Tatarenda, April 1st, 1902.

A male in much-worn plumage and a young bird with the wing-coverts edged with pale rufous, the yellow of the cap pale and only slightly developed. The most remarkable feature is, however, that the primaries are not yet excised, and that on the left wing the inner web of the outer primaries is somewhat broader than on the right.

When flying *Milvulus* opens and shuts its tail, making movements like a pair of scissors.

74. *STELGIDOPTERYX RUFICOLLIS* (Vieillot).

Tatarenda, April 1902. Only seen among the palms.

75. *MIMUS TRIURUS* Vieill.

Iris brown. Tatarenda, April 1902.

76. *PARULA PITIAYUMI* (Vieill.).

Tatarenda, April 1st, 1902.

77. *GEOTHLYPIS VELATA* (Vieill.).

A specimen from Fortin Crevaux, April 1902.

78. *SYCALIS FLAVEOLA* (Linn.).

Two young birds, not yet fully grown, were shot at Tatarenda in April 1902.

79. *POOSPIZA HYPOCHONDRIACA* (d'Orb. et Lafr.).

I consider a young bird, not yet fully grown, shot at Colonia Crevaux, to belong to this species. It was the only specimen of the kind observed.

80. *CORYPHOSPINGUS CRISTATUS* (Gm.).

Two male specimens in moult were obtained at Tatarenda, April 1902.

81. *PAROARIA CUCULLATA* (Lath.).

Two young specimens from Colonia Crevaux. These birds are said to occur in large flocks along the reed-beds on the river.

82. *GUIRACA ARGENTINA* Sharpe.

A bird shot at Tatarenda in April 1902 I regard as a female specimen of this species, or, rather, subspecies.

83. *TANAGRA CYANOPTERA* (Vieill.).

Rather common, but very shy; lives in open places in the forest or at the edge of the woods.

84. *TANAGRA BONARIENSIS* (Gm.).

Specimens were collected at Fortin Crevaux in April 1902, and others observed at Tarija, Bolivia. This bird occurs here and there in couples along the edge of rivers.

85. *PYRANGA TESTACEA* Sclater & Salvin.

Only one specimen, observed and shot at Colonia Crevaux in April 1902.

86. *MOLOTHRUS BADIUS* (Vieill.).

Only one specimen, shot at Colonia Crevaux in April 1902.

87. *ICTERUS PYRRHOPTERUS* (Vieill.).

Tatarenda, April 1902. In large flocks on the maize-fields.

88. *CYANOCORAX CHRYSOPS* (Vieill.).

Tatarenda, April 1902. This bird resembles the common European Magpie in its habits. It emits various sounds, mimics other birds, and when flying in flocks produces a deafening noise. Usually eight or ten individuals are seen together. It is common near houses, in orange-groves, and other similar places.